

## REMARKS

### Drawings

The Examiner has objected to Figure 1 because it is not designated by a legend : "Prior Art". Applicant submits herewith a proposed drawing correction, in red, to Figure 1 to add a legend : "Prior Art". Applicant wishes to defer submission of formal drawings until the application is allowed by the Examiner.

### Claim Objections

The Examiner has objected to claim 14 because of the following informalities: the claim recited "electroplating plating". Applicant has amended claim 14 to remove the word "plating" and recite "electroplating". Applicant has likewise amended claim 10.

### Claim Rejections 35 U.S.C. §112, second paragraph

The Examiner has rejected claims 1-5 and claims 11-20 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant has amended claims 1 and 6 to more particularly recite "semiconductor substrate" in order to clarify the claims. Applicant has also amended claims 1, 6, and 11 to more particularly recite "first dielectric layer" and also similarly amended claims 6 and 11 to more particularly recite "second dielectric layer" in order to provide sufficient antecedent basis for these limitations in the claims. Applicant has thereby amended claims 1, 6, and 11 to more particularly point out and distinctly claim the subject matter which

Applicant regards as the invention. Applicant respectfully requests the removal of 35 U.S.C. §112, second paragraph, rejections of claims 1-5 and claims 11-20.

Claim Rejections 35 U.S.C. §102(b)

The Examiner has rejected claims 1, 3-5 under 35 U.S.C. §102(b) as being anticipated by Kunieda et. al. (U.S.C 4,941,810). Kunieda does not anticipate Applicant's invention as claimed in claims 1, 3-5. Kunieda teaches forming phosphorus-doped silicon dioxide layer 16, silicon nitride layer 18, photoresist layer 20, and a window region 22 through layers 16, 18, 20 to expose bonding pad 15 for testing purposes. (See Figure 1, col. 1, lines 64-68 and col. 2, lines 1-6). Applicant claims in claim 1 : "forming a conducting barrier layer over said second dielectric layer, over sidewalls of said opening, and over said exposed top surface of said bond pad to form a continuous seal".

The Examiner has rejected claims 1, 3-4 under 35 U.S.C. §102(b) as being anticipated by Byrne (U.S. 5,369,299). Byrne does not anticipate Applicant's invention as claimed in claims 1, 3-4. Byrne teaches forming a passivation layer 30 as a protective seal for bonding pad 24 to keep out moisture, wherein a first dielectric layer 30A is encapsulated within a second dielectric layer 30B. (See Figure 1 and col. 3, lines 42-45). However, Applicant claims in claim 1 : "forming an opening to expose the top surface of said bond pad, wherein the sidewalls of said opening expose the edges of said second dielectric layer and said first dielectric layer; and forming a conducting barrier layer over said second dielectric layer, over sidewalls of said opening, and over said exposed top surface of said bond pad to form a continuous seal".

The Examiner has rejected claim 11 under 35 U.S.C. §102(b) as being anticipated by Havemann (U.S. 5,565,384). Havemann does not anticipate

Applicant's invention as claimed in claim 11. Havemann teaches forming an organic-containing dielectric layer 22 followed by an inorganic dielectric layer 24. (See Figure 1D and col. 4, lines 3-14). Applicant claims in claim 11 : "forming a conducting barrier layer over said second dielectric layer, over sidewalls of said opening, and over said exposed top surface of at least one of said spaced apart member to form a continuous seal, wherein said second dielectric layer and said barrier layer are resistant to moisture penetration..." Havemann teaches forming an organic-containing layer 54, an inorganic dielectric layer 56, and silicided contacts 48. (See Figure 7, col. 6, lines 32-42). The Examiner refers to silicide as "a barrier metal inherent". This silicide is formed in polysilicon conductors and is entirely different in structure and purpose from the conducting barrier layer claimed by Applicant in claim 11.

#### Claim Rejections 35 U.S.C. §103

The Examiner has rejected claims 6-8 under 35 U.S.C. §103(a) as being unpatentable over Byrne (U.S. 5,136,364). Byrne fails to teach or render obvious Applicant's invention as claimed in claims 6-8. Byrne teaches that "the wraparound effect on layer 13 is created by first depositing layer 12 and etching the hole therein. Then layer 13 is applied and photolithographically etched to produce the structure shown." (See Figure 1 and Col. 2, lines 29-34). This is different from what the Applicant claims in claim 6 where the opening is not formed until after the second dielectric layer is deposited over the first dielectric layer so that "the sidewalls of said opening expose the edges of said second dielectric layer and said first dielectric layer..."

The Examiner has rejected claims 1-5, 11-13, 15, 17-19 under 35 U.S.C. §103(a) as being unpatentable over Byrne (U.S. 5,136,364) in view of Byrne (U.S. 5,369,299) (previously applied). Byrne '299, incorporating Byrne '364 by reference

in its entirety, does not teach or render obvious Applicant's invention as claimed in claims 1-5, 11-13, 15, and 17-19. Byrne teaches that the protective seal for bonding pad 24 is formed by having the second dielectric layer wraparound the edges of the first dielectric layer in the opening over the contact. (See Figure 1 and col. 4, lines 55-66 in Byrne '299). Applicant claims in both claim 1 and claim 11 that the opening is not formed until after the second dielectric layer is deposited over the first dielectric layer so that "the sidewalls of said opening expose the edges of said second dielectric layer and said first dielectric layer, and forming a conducting barrier layer over said second dielectric layer, over sidewalls of said opening, and over said exposed top surface of said bond pad to form a continuous seal".

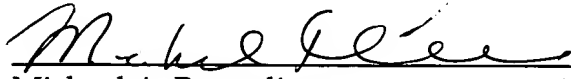
The Examiner has rejected claims 9-10, 14 and 20 under 35 U.S.C. §103(a) as being unpatentable over Byrne '364 as applied to claims 1-8, 11-13, 15, and 17-19 above, and further in view of Mis et. al. (U.S. 5,767,010). Byrne and Mis in combination do not teach or render obvious Applicant's claims in claims 6-10 and claims 11-20 since Byrne does not teach what Applicant claims : forming a conducting barrier layer over second dielectric layer, over sidewalls of opening to bond pad, and over exposed top surface of bond pad to form a continuous seal.

The Examiner has rejected claim 16 under 35 U.S.C. §103(a) as being unpatentable over Byrne '364 as applied to claims 11 above, and further in view of Lou (U.S. 5,759,906). Byrne and Lou in combination do not teach or render obvious Applicant's claims 11-20 since Byrne does not teach what Applicant claims : forming a conducting barrier layer over second dielectric layer, over sidewalls of opening to bond pad, and over exposed top surface of bond pad to form a continuous seal.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,  
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

Date: 12/20

  
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